

Figure 1: Self Addressing Microlocations  
(Microlithographic Fabrication)

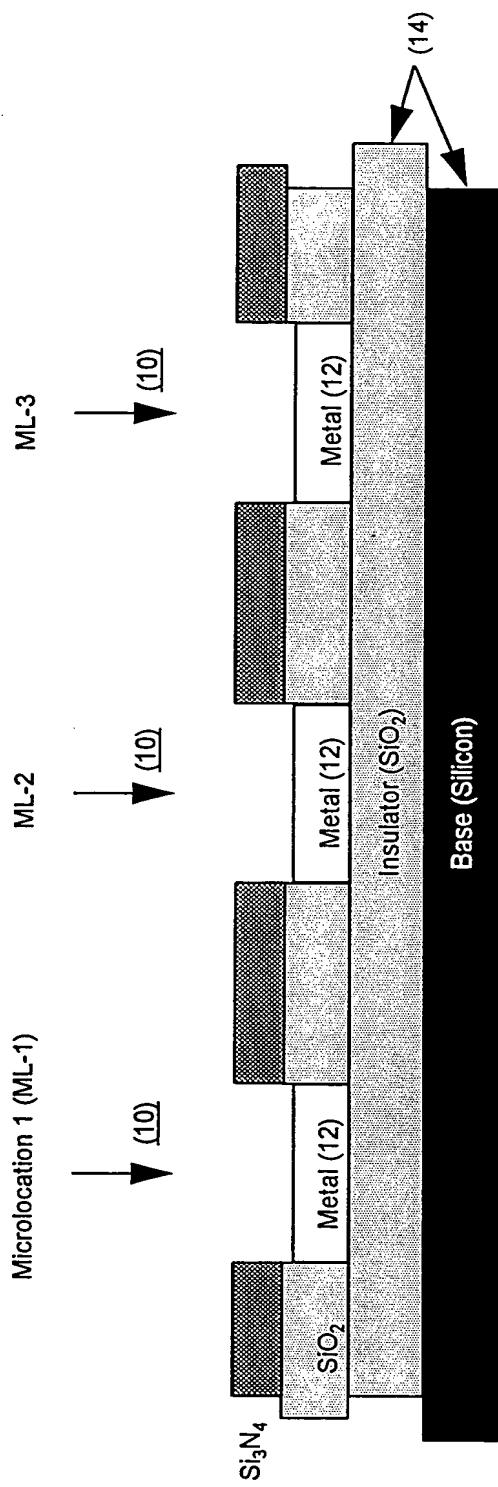


Figure 2: Microlocation Design Features

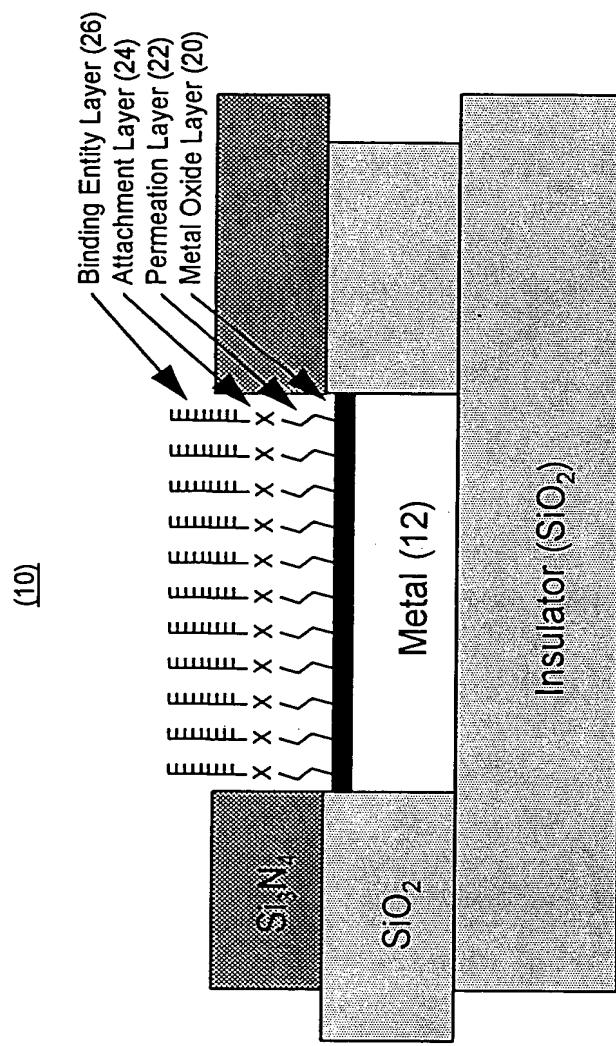


Figure 3: Self-Addressable 64 Microlocation Chip

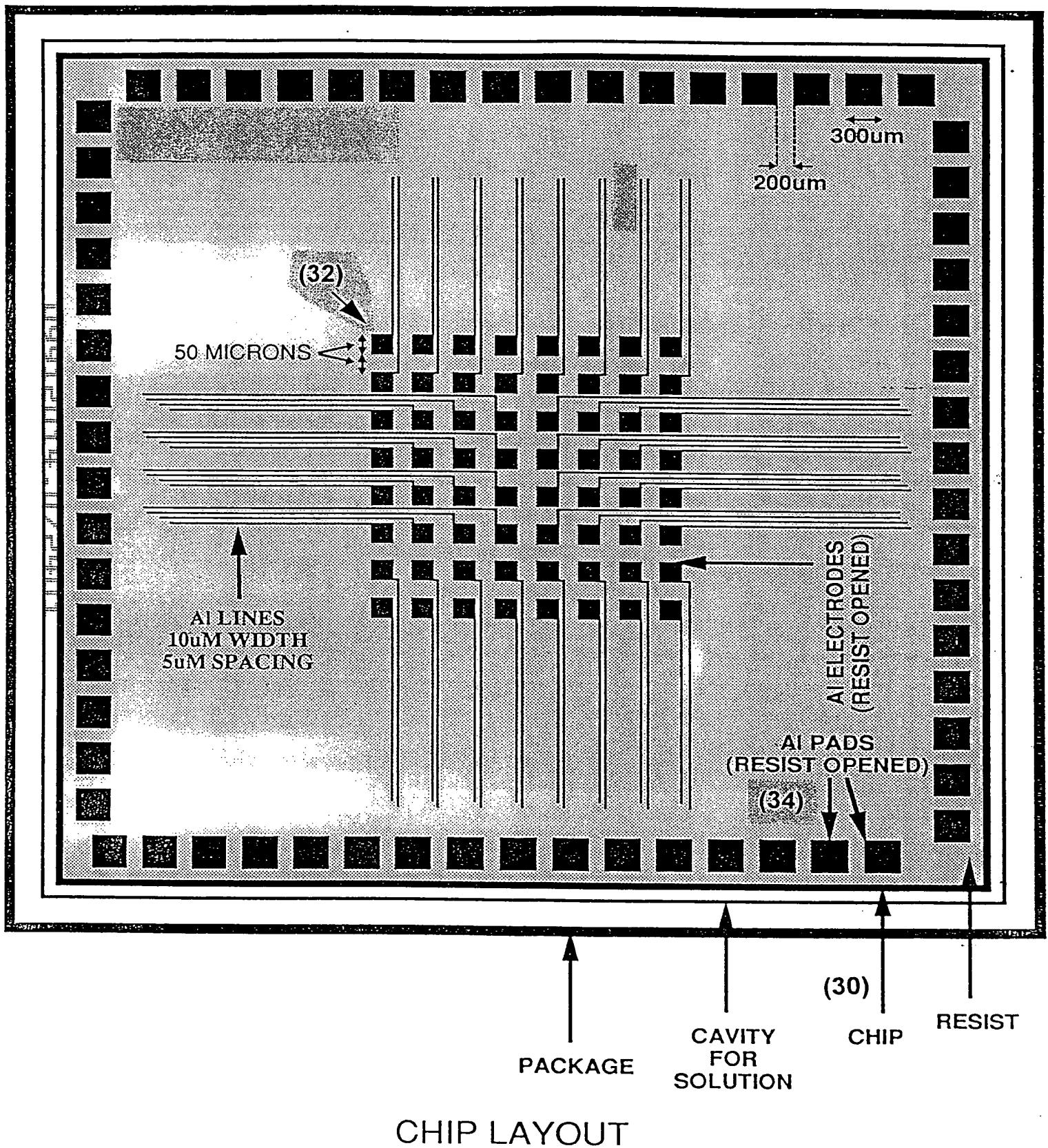


Figure 4: DNA Attachment Chemistry

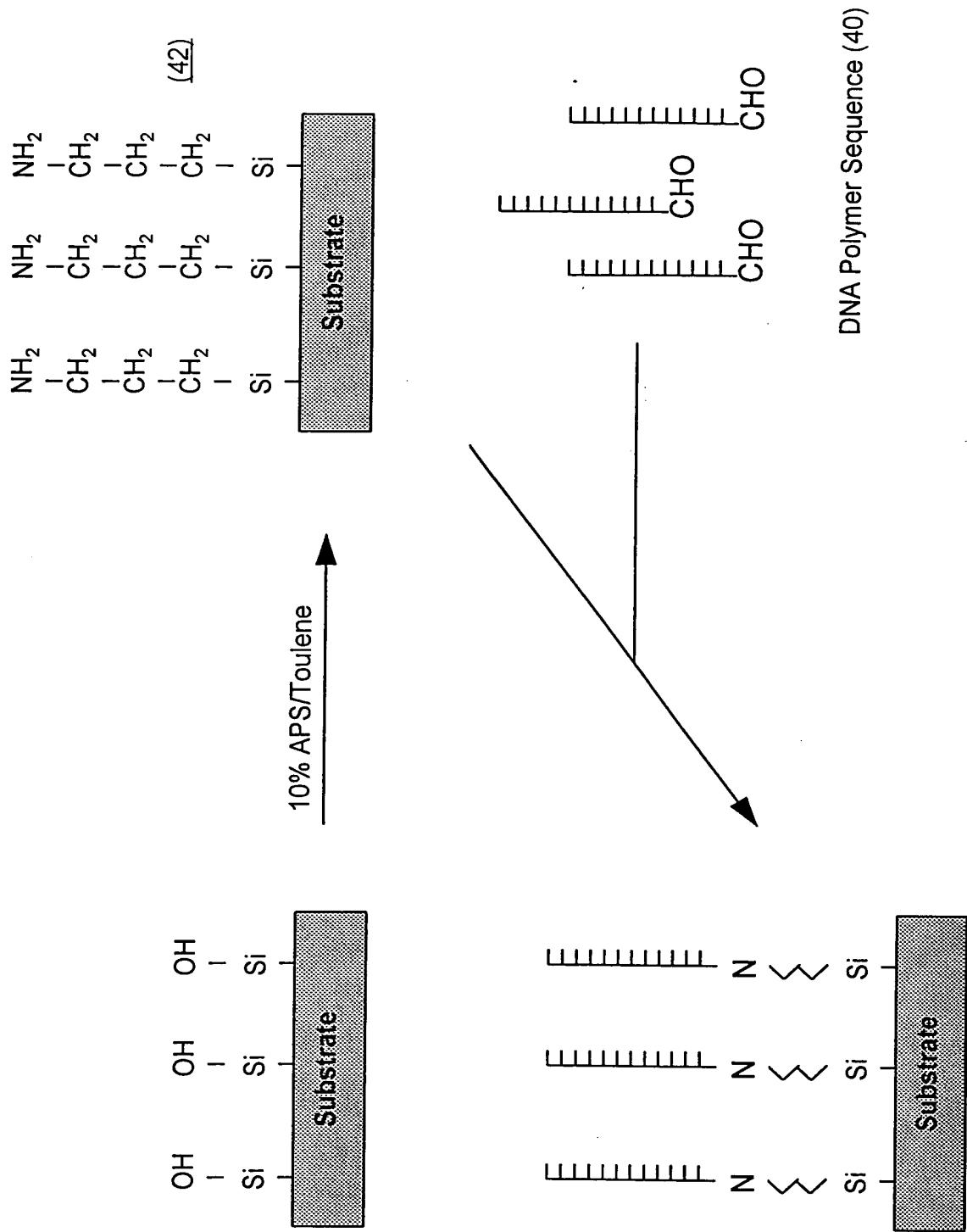
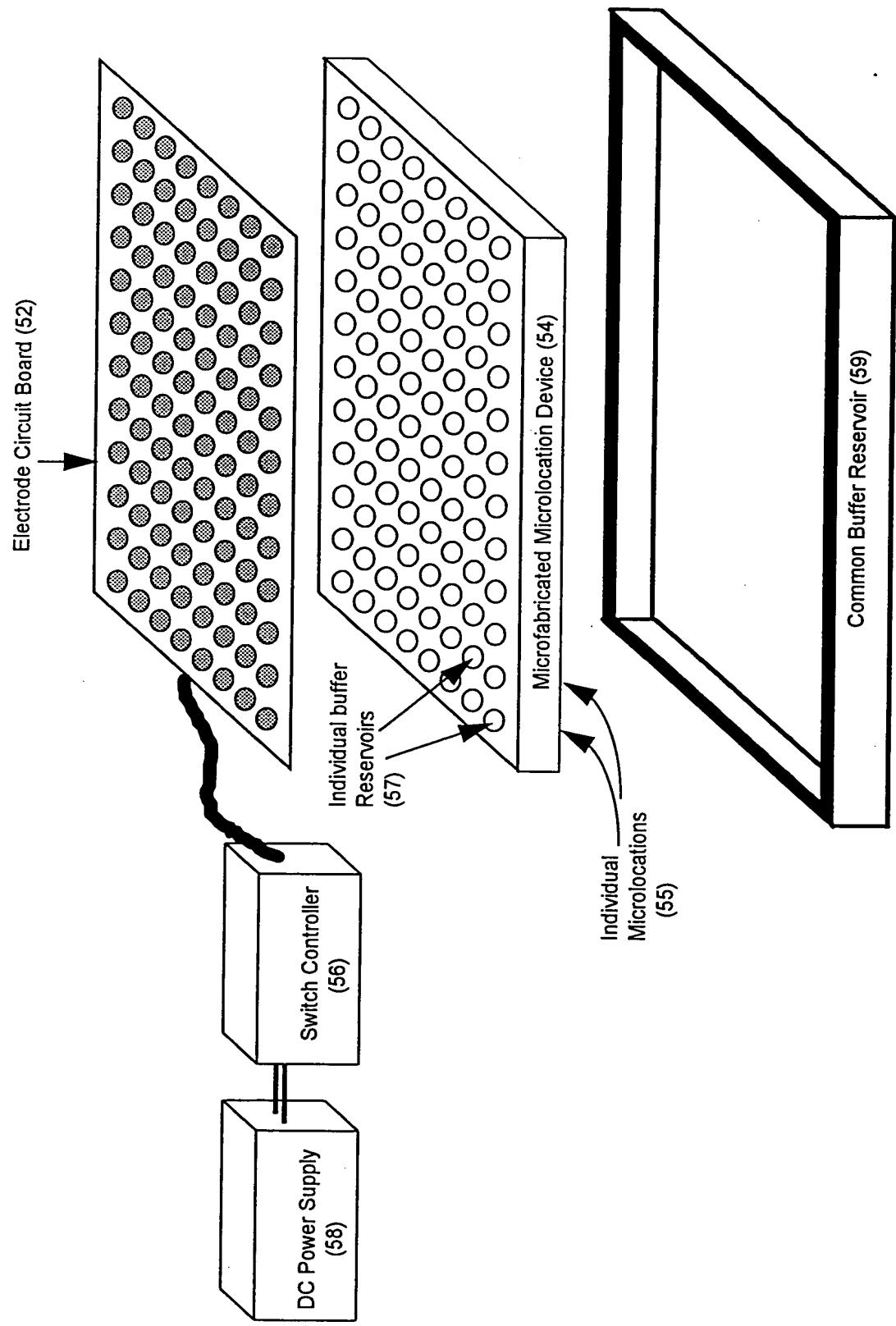


Figure 5: Micro-Machined Device (Exploded View)



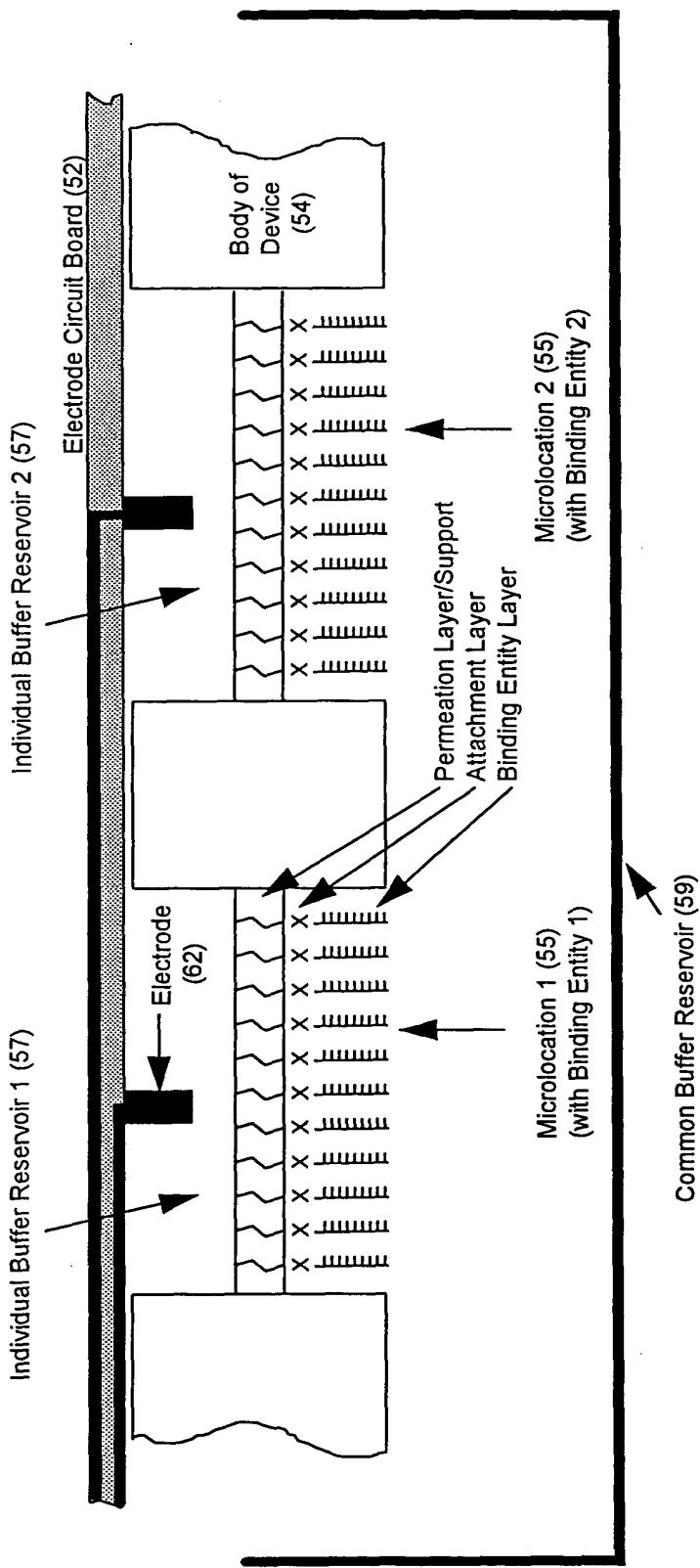


Figure 7: Electronically Controlled Concentration Effect

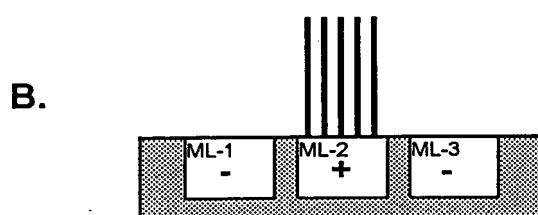
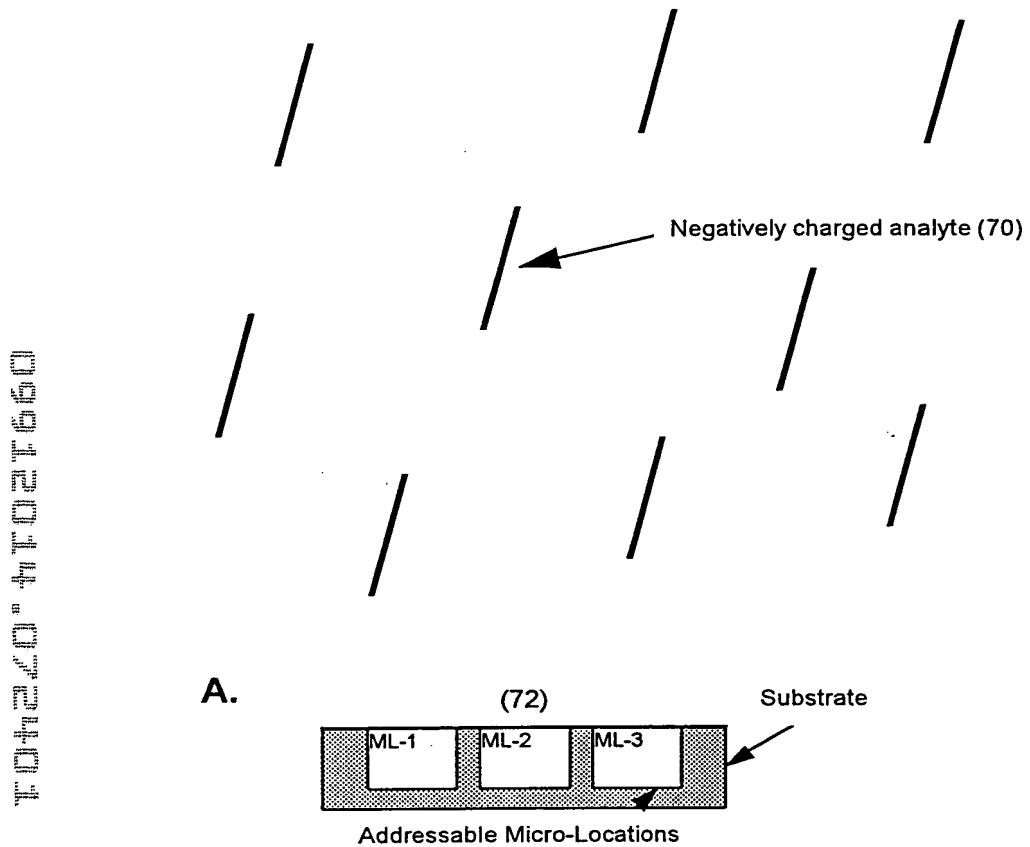


Figure 8: Electronic Addressing and Self-Directed Assembly of Device.

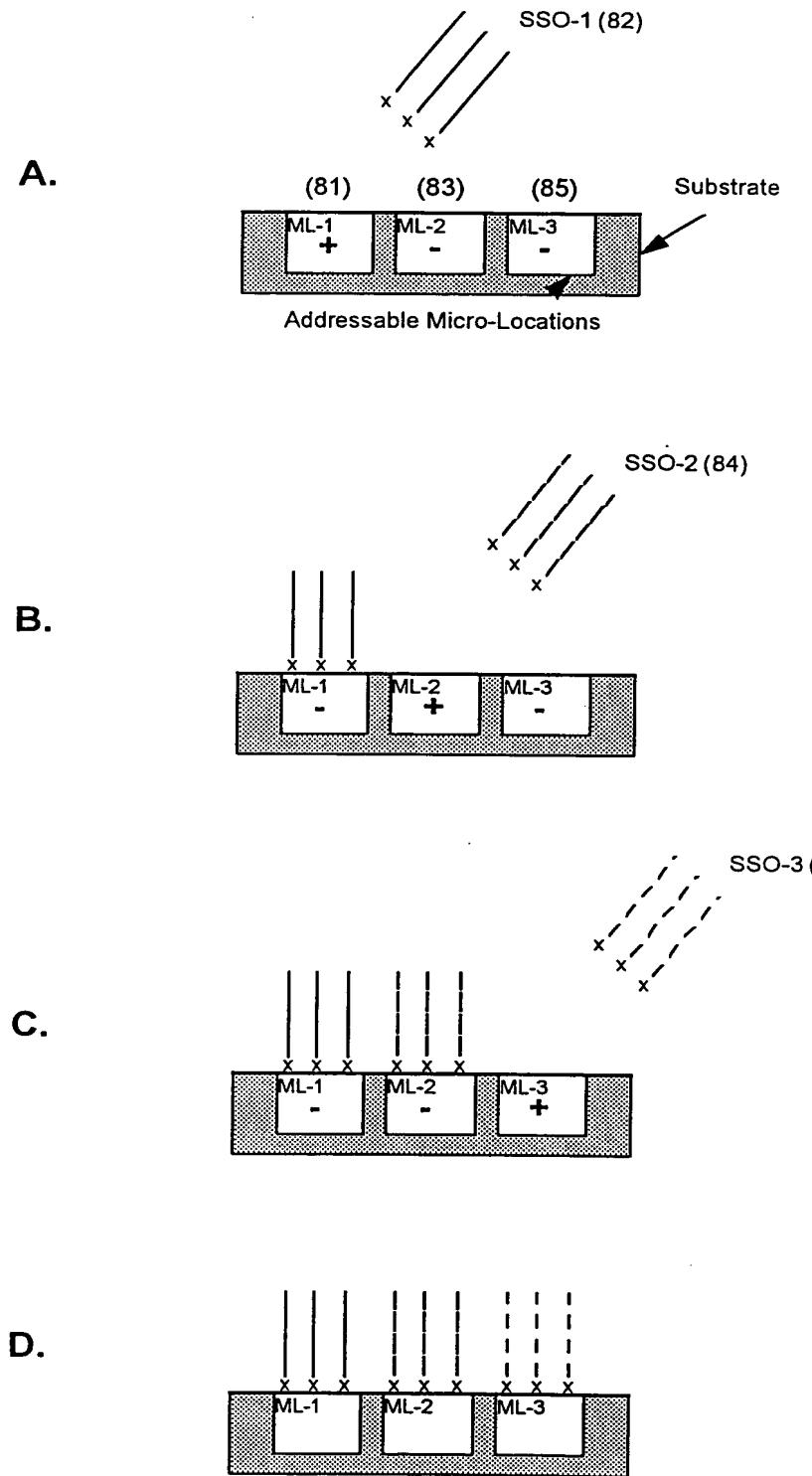
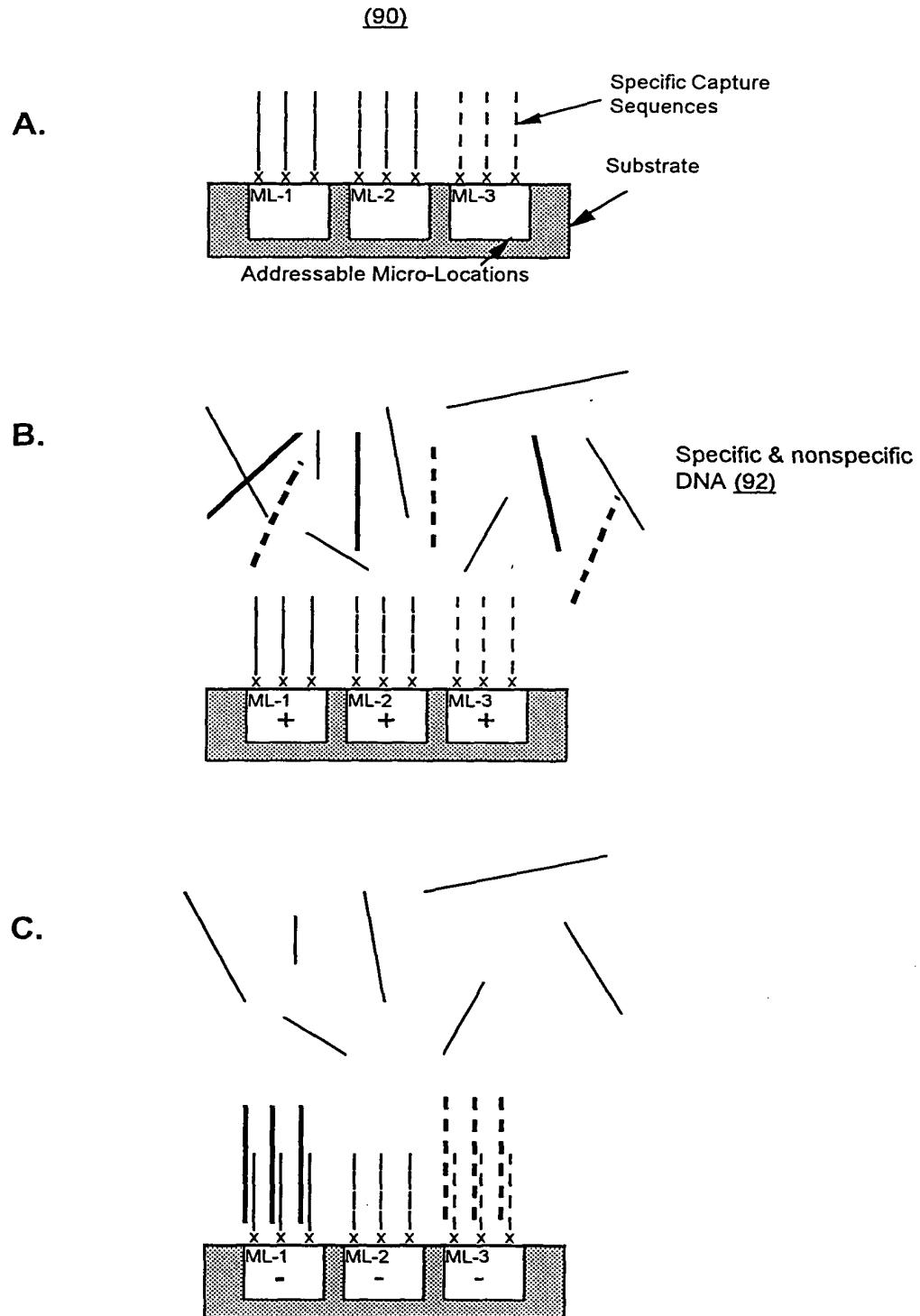


Figure 9: Electronically Controlled Hybridization Process



F042Z0 "4T02T660

Figure 10: Electronically Directed Serial Hybridization Process

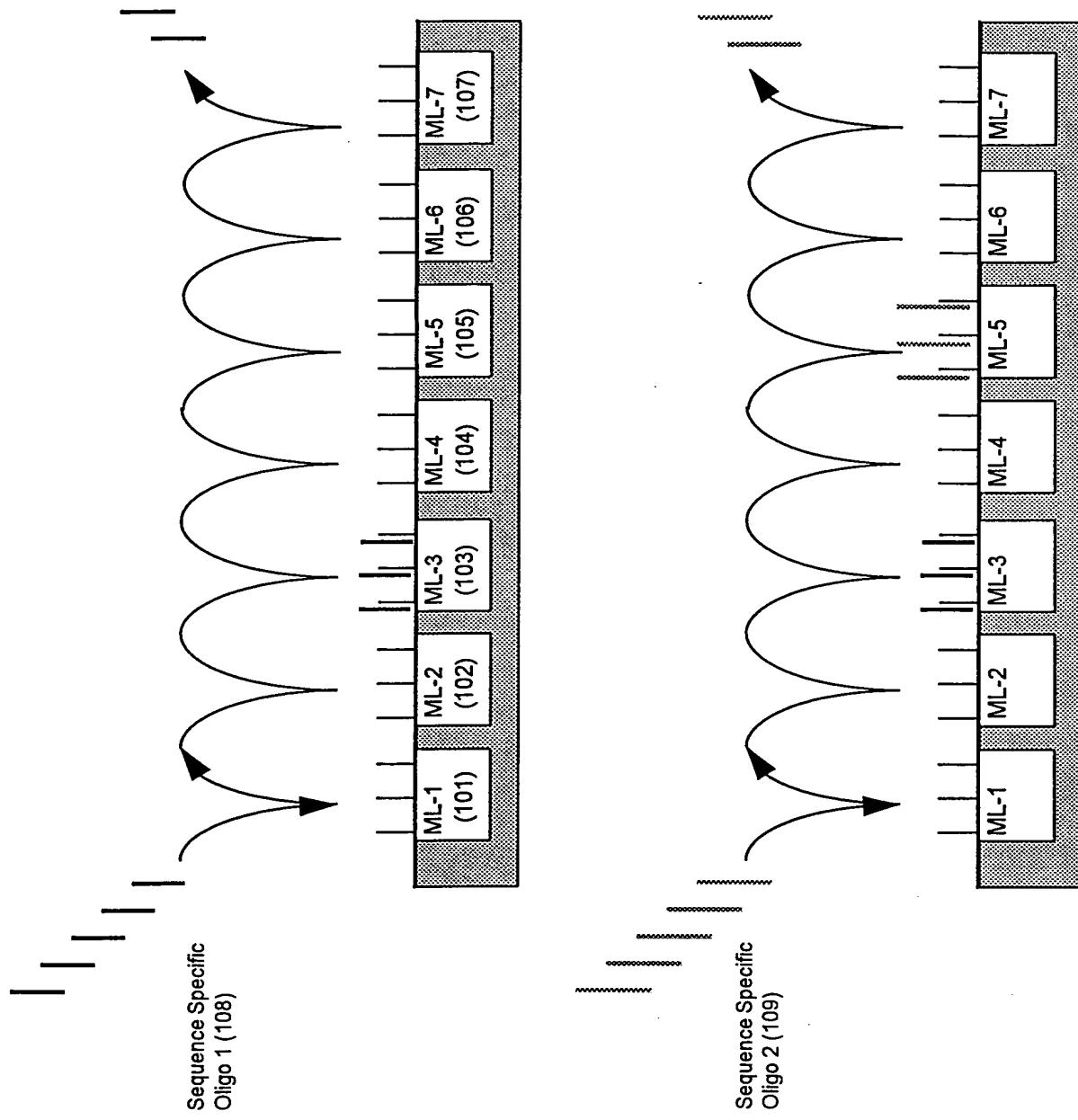
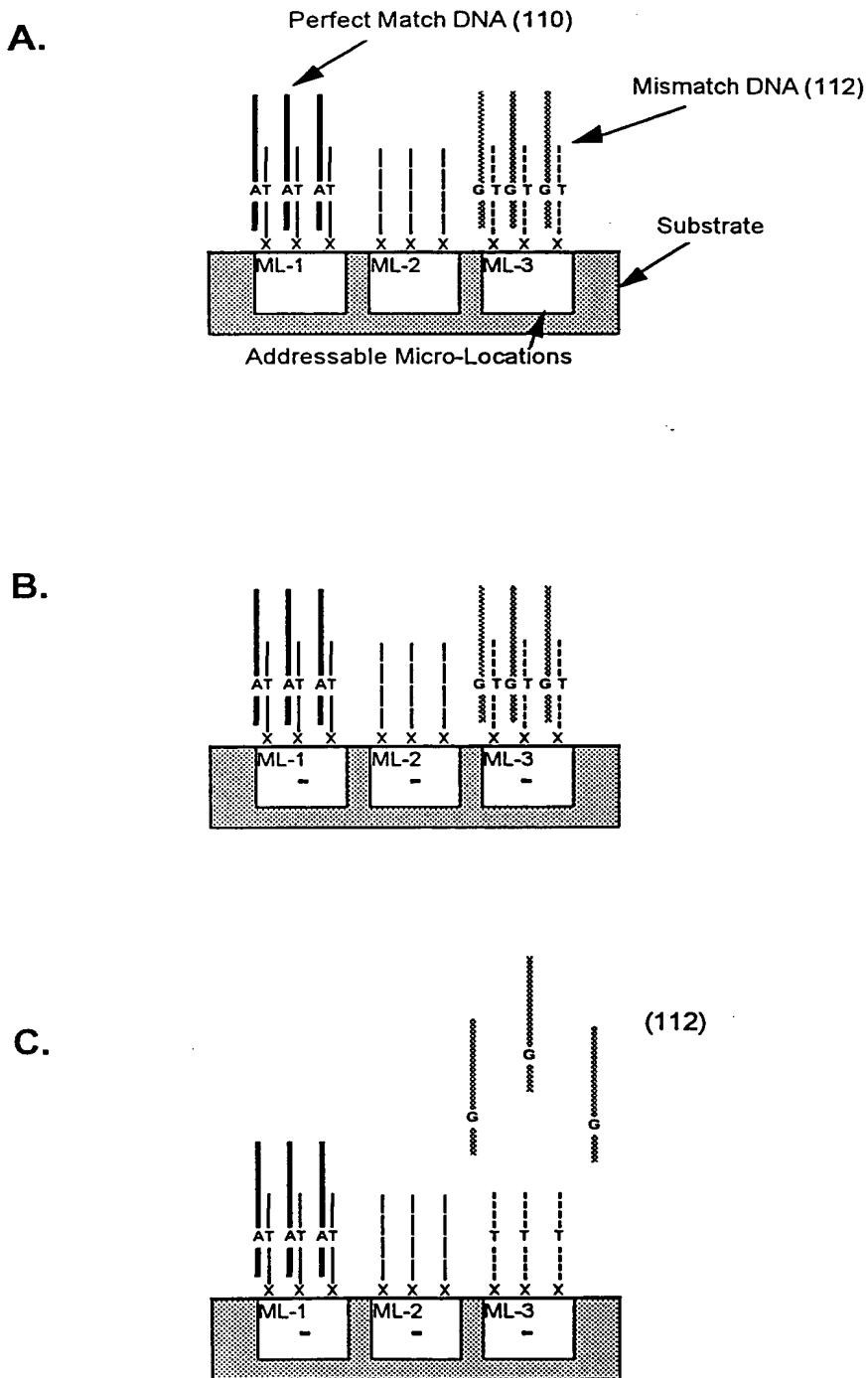


Figure 11: Electronic Stringency Control (ESC) of Hybridization Process



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Figure 12: Electronically Controlled Fluorescent Dye Detection Process

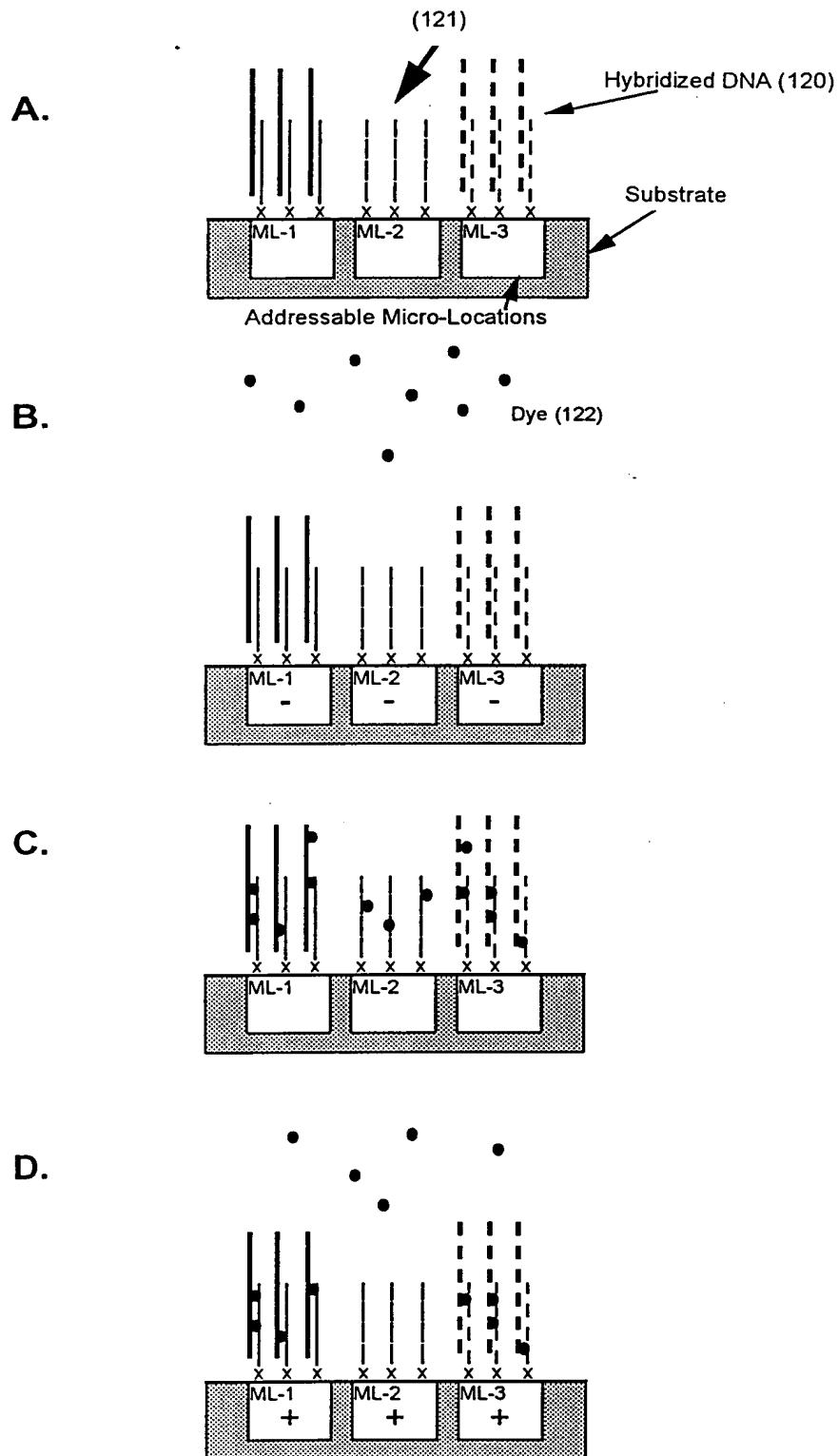


Figure 13: Electronically Controlled Template Replication

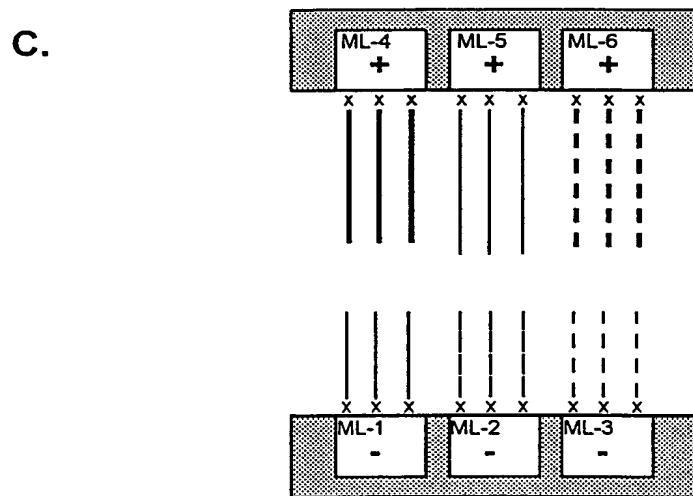
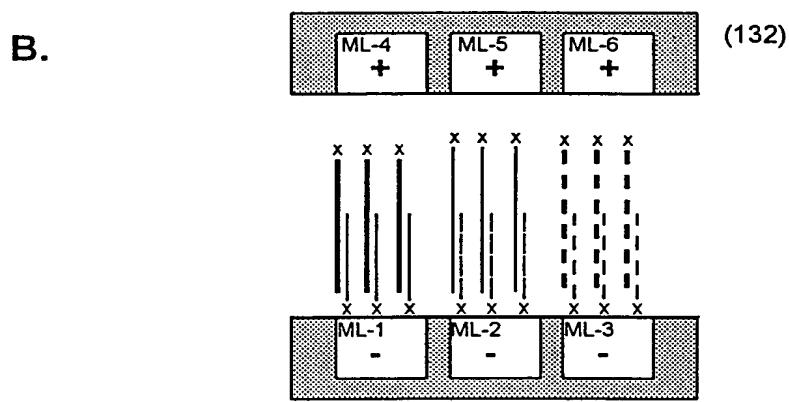
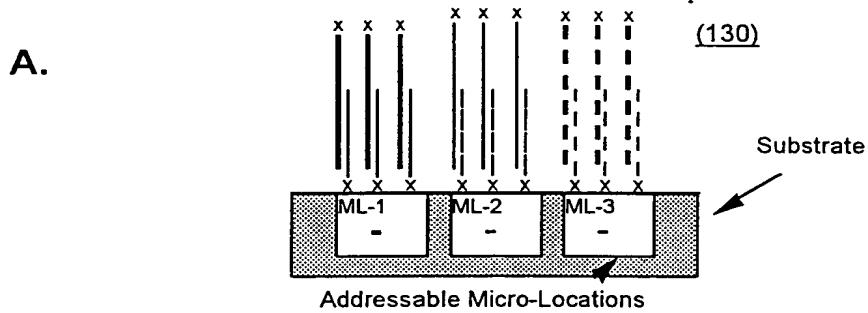


Figure 14: Electronically Directed Combinatorial Synthesis.

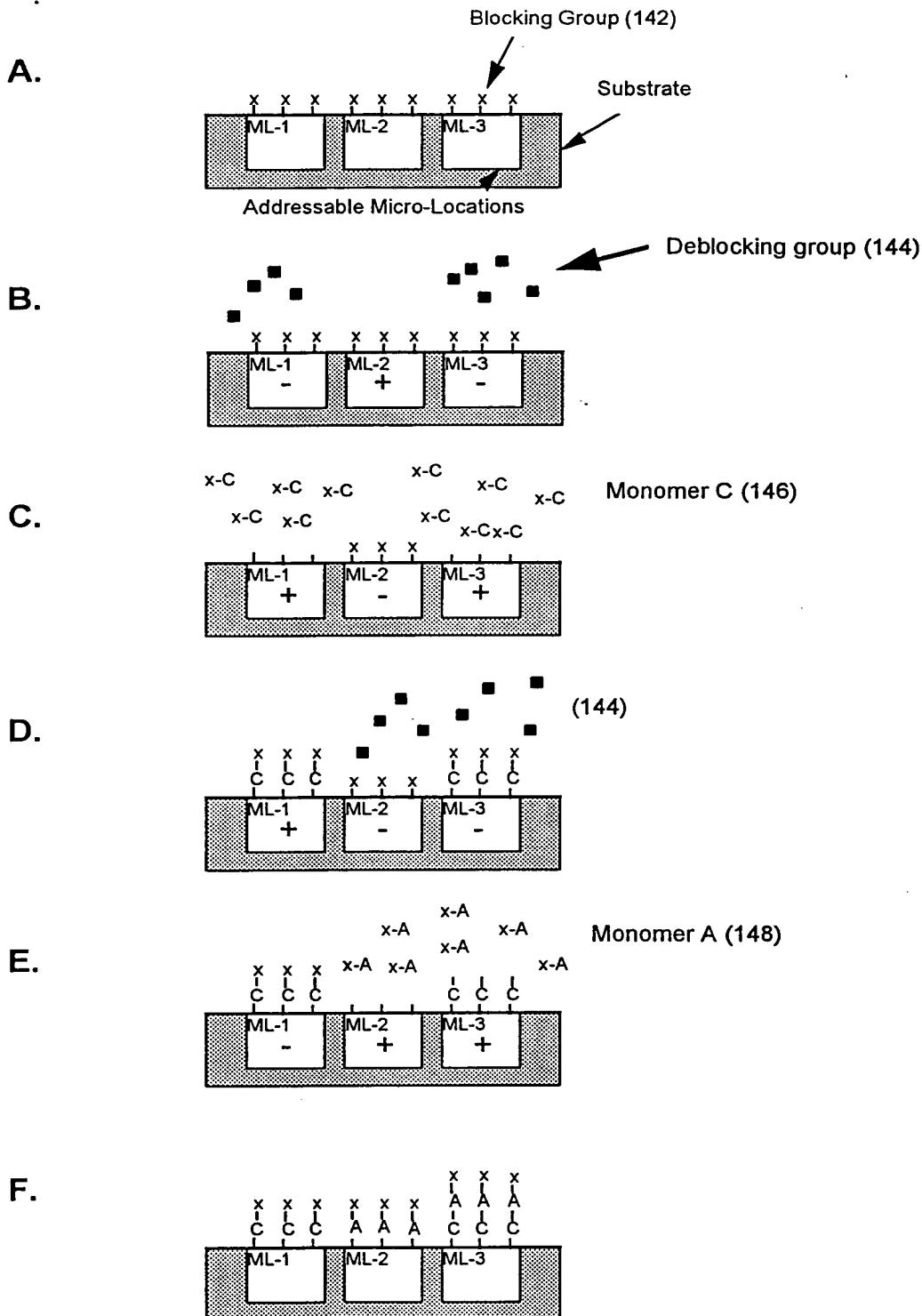


Figure 15. TDT™ Gel Electrophoresis

## Relative Sensitivity for Mismatch Discrimination

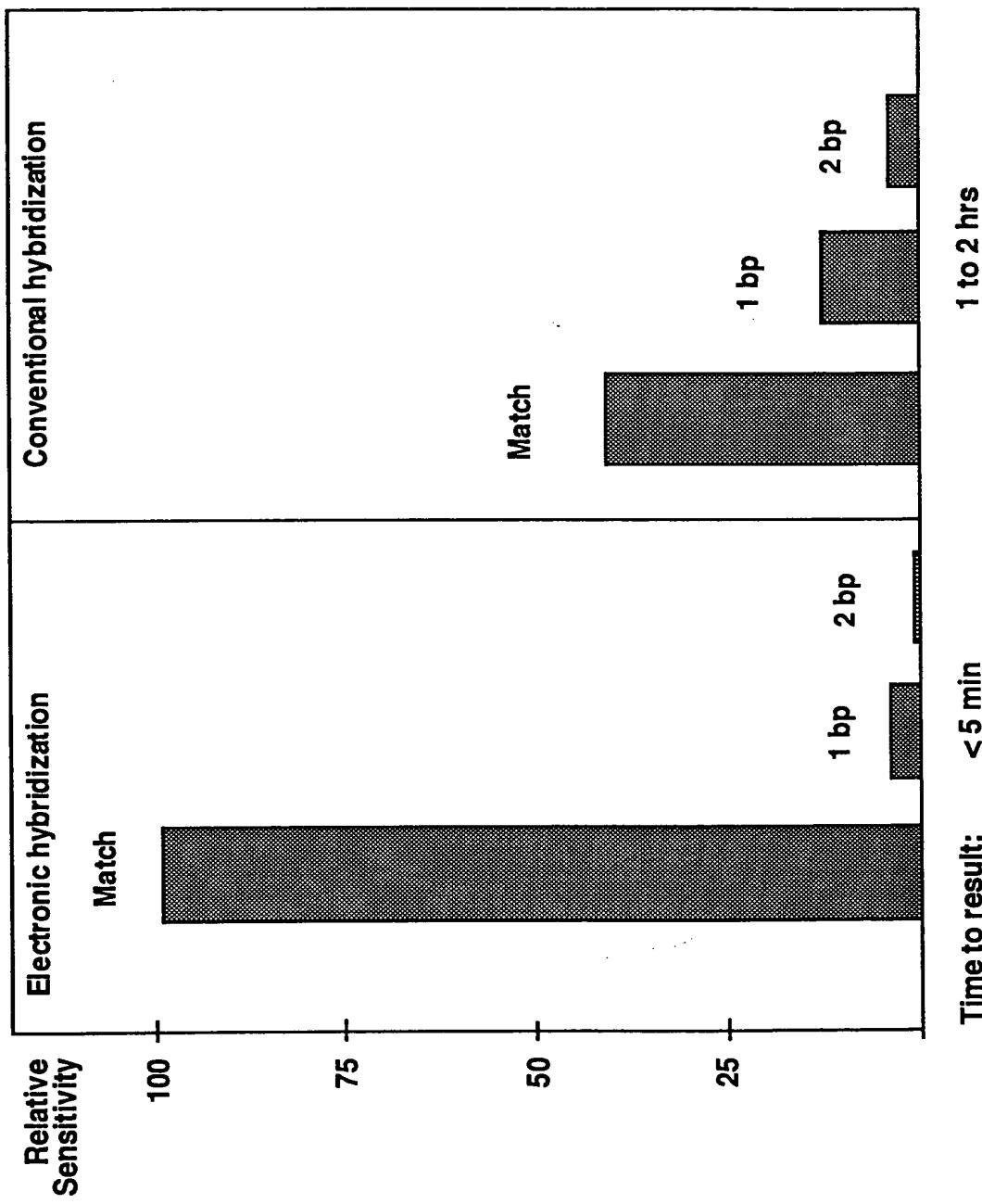
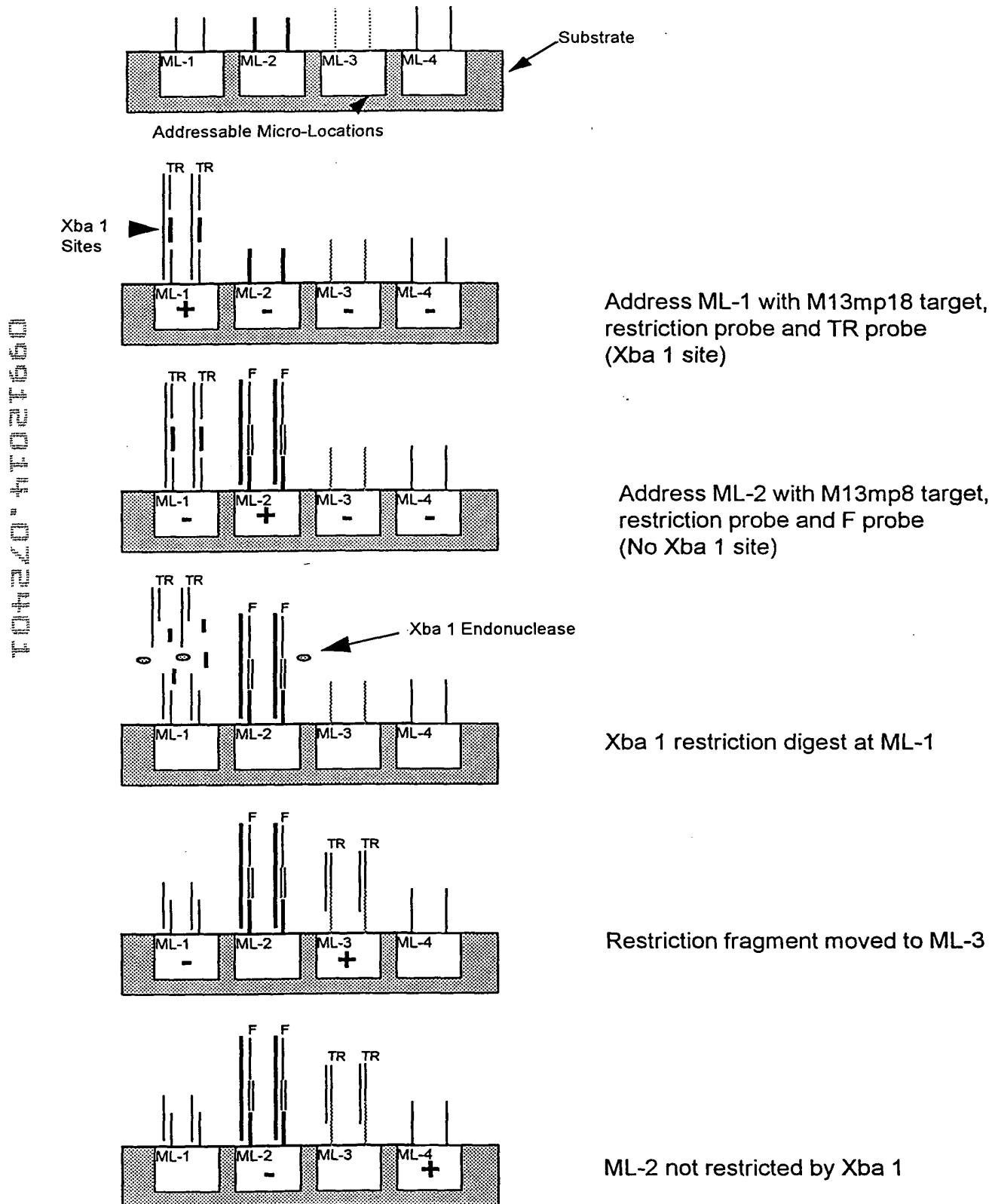
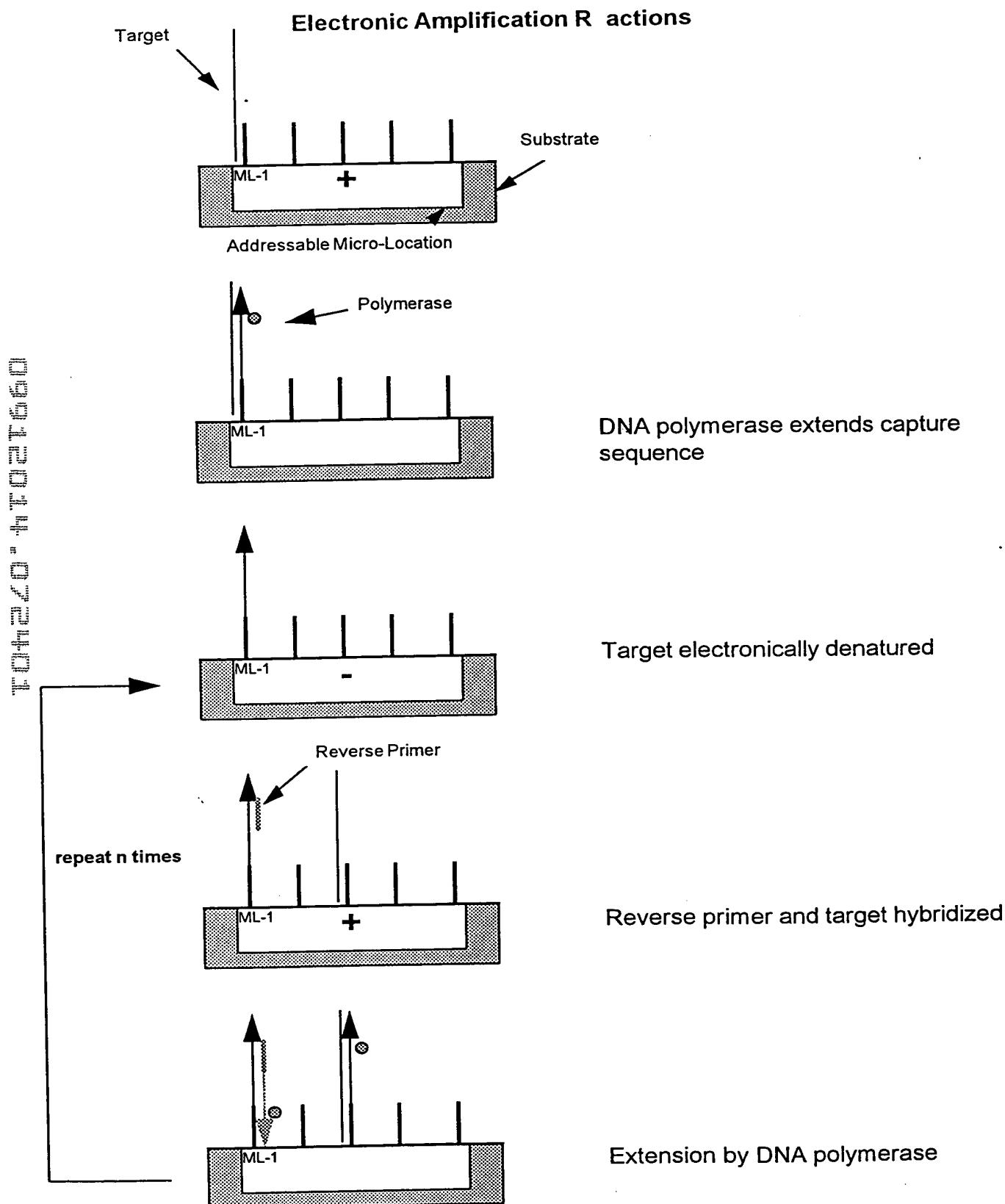


Figure 16

Electronic Restriction Cleavage



**Figure 17**



**Figure 18**  
**Complete APEX System with Sample Preparation**

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